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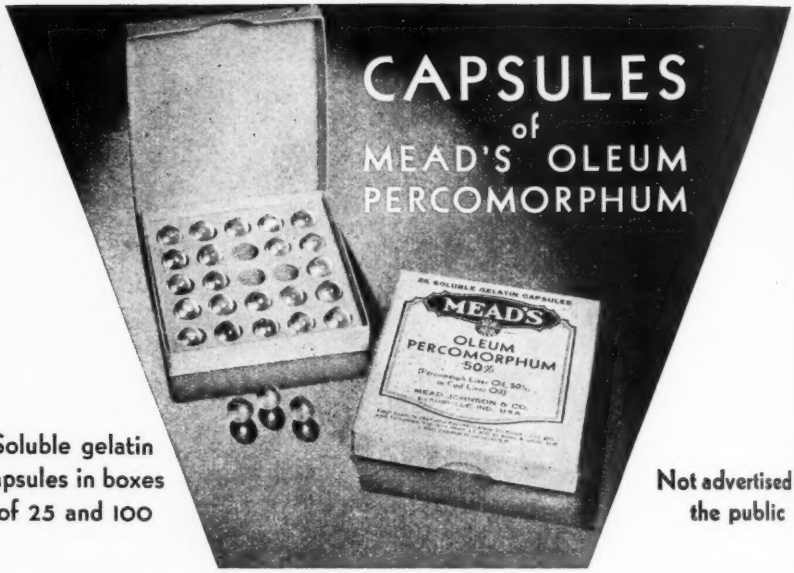

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Vol. VIII DECEMBER, 1938 No. 10

SPECIAL EDUCATIONAL QUALIFICATIONS OF THE SCHOOL HEALTH EDUCATOR*

CLAIR E. TURNER, DR. P.H., SC.D.
Professor of Biology and Public Health
Massachusetts Institute of Technology

May I briefly consider three questions. Upon what important elements of the situation is there agreement? What present tendencies in health and in education are related to the training of health educators? What are the problems and emphases which need special consideration at this time?

There are certain items upon which there is general agreement among professional workers in school health education:

1. Health training and instruction in the elementary grades must be in the hands of classroom teachers.

2. Considering the world or even the United States as a whole, the great potential health contribution of the classroom teacher has not been developed to anything like its potential capacity.

3. This teacher contribution cannot be made most effectively without the leadership of an adequately trained supervisor. (Such pronouncements have appeared from the White House Conference, from National Conferences on Health Education, from this Association, from the World Federation of Education Associations, and from other professional bodies.)

4. Good supervision of health education has been well received and has made a demonstrable contribution in those communities where it has been established.

5. Additional soundly trained workers are needed for health education supervision and for health instruction and health counseling at the secondary school level.

6. One year of graduate work following a carefully planned program of study leading to the bachelor's degree is the very minimum of training. There are, however, some differences of opinion with respect to the kinds of person and kinds of training which are most desirable.

Certain tendencies are discernible in public education which may affect the training of health educators:

*Read at the annual meeting of the American School Health Association, Kansas City, October 27, 1938.

1. We see an expansion in the amount of general adult education carried out by school departments.

2. Almost all young people now complete the high school courses, and this is causing a tremendous change in the nature of secondary school education.

3. In many parts of the country there is a rapid growth in the junior college movement as a phase of public education.

4. With a limited number of positions to fill, industrial concerns and other employers are placing increasing emphasis upon the physical, mental, and emotional health of the new employee.

Situations such as these demand an increased contribution to health education above the elementary grades.

From the standpoint of health administration, there are certain significant tendencies of considerable importance.

1. The emphasis upon public health education is rapidly increasing.

2. In many places, generalized public health nursing is replacing specialized nursing, including school nursing.

3. More and more frequently an educational program in the schools is being used to secure public support for the community health program.

4. There is a growing recognition of the importance of nutrition in the public health program.

5. Health departments have recently found themselves with more adequate funds. Federal money is now available for many local health activities. It may be that health education in schools will be stimulated by health departments, and that an increasing number of communities will develop the coordinated program of public health education and school health education.

6. There is a growing appreciation of the importance of education in all phases of public health work. In formulating a philosophy of public health, both health officers and directors of school health have had to decide whether they should concern themselves primarily with the development of health services or with the task of educating people to care for themselves with the aid of available professional services.

It was natural that health services should be developed first. It is easier to get money for the cure of illness and the correction of defects than for their prevention. It has seemed logical to physicians who have gone directly from private practice to public health work to do for the public with tax money the same sort of thing which would be done for an individual in a doctor's office. In general, we have tended to do things for people and to them instead of educating them to do things for themselves.

There are plenty of pronouncements to the effect that the whole school health program is educational. We recognize that those health experiences of the pupil which come outside the

hygiene class are just as important educationally as those that come within the bounds of formal instruction. Medical and nursing services are said to be education, since they stop short of treatment. *Actually* very few school systems have organized these services to develop anything like their maximum educational value.

In general, our school programs have not sought to educate pupils and parents in the value of utilizing medical service, in spite of the fact that the wise use of medical care is by all odds the most important single hygienic practice which a family can follow.

Schools employ dentists who diagnose dental conditions and accumulate statistics on the extent of dental caries. In many school systems the work of the dentist stops at this point. Children are sent to the family dentist or the clinic where the examination is repeated. Why should we not educate all children to go to the dentist in the first place, teaching them the value of regular dental care throughout life?

We have too often examined children, recorded their defects, classified them, sent a few children to public clinics, but stopped short of an educational program which would have promoted the health of all children. We have educated away from the concept of personal responsibility for health maintenance, and have taught the assumption of increasing responsibility for the community.

Yet in spite of increased governmental expenditures upon individual citizens during the last few years, education has increasingly demanded the attention of health officials, and an increasing number of such officials have come to believe that education is the basis of public health endeavor. Those of you who have read "Intensive Rural Hygiene Work in Netherlands India" (available upon request from the Department of Public Health, Batavia-Centrum, Java, N. I.) understand what it means to operate a health department on this philosophy. The use of education in the public health program of Detroit, the place of education in the public health program of those counties in Michigan in which the W. K. Kellogg Foundation is at work, together with the increase in health education activities in New York City are examples of this changed point of view.

The pronouncement of national leaders from within this Association have repeatedly demanded that the whole school health program should be made really educational. If and when this philosophy becomes generally effective within health departments and school departments, health educators will find themselves in a new situation with many new tasks.

What have the foregoing considerations to suggest relative to problems and to present emphases?

First, let us consider the training of health teachers in the secondary school. Hygiene is now being taught by the science teachers, by the teachers of physical education, and less frequently

by specially-trained full-time health teachers. Present tendencies suggest that it is becoming increasingly important for the teacher and the counselor at the secondary school level, whatever his teaching affiliations, to have the public health approach. In order to work most effectively, he needs to understand, not only personal hygiene, but also the health department and community health policies and activities. The high school itself becomes a cooperating agency in city-wide health projects, and the kind of training needed is essentially that indicated in the report of Dr. Sundwall's Committee*

As these tendencies develop, the Director of Health Education will also become increasingly concerned with the public health program in the community. Health education becomes increasingly a phase of public health and not merely a program of habit training. With generalized nursing, health examinations in the office of private physicians, dentists for the majority of children, and health education in school synchronized with public health education in the community, the Director of Health Education who furnishes the leadership to enable teachers to play their part in the public health program will truly be a public health worker and a coordinator of the efforts of several people as they focus upon the classroom and the school child.

The kind of training proposed by Dr. Sundwall's Committee would seem sound and desirable. Have we not also reached the point where every school health educator should be trained in public health education and community health education activities to the extent of at least one well organized course? We should be keenly aware of the possibility of future fusion between public health education and the school health education programs.

At the same time, we must not forget that the school health educator is an educator. He or she is furnishing educational leadership, and to do this should possess unusual skill as a teacher. Employment by a school department, in most states, will require eighteen semester hours of professional study in the field of education. While this schedule is not hard and fast, it should include (if adequate) sound instruction in educational psychology, mental hygiene, the growth and development of the child, the elementary school program, secondary education, testing and measurement. A study of the sociology of the family and of methods of supervision is also desirable.

In summary: The importance of the best possible training for health teachers and health counselors in the secondary schools and for supervisors of health education is clearly recognized. There would be general agreement as to the desirability of the basic subject matter training recommended by Dr. Sundwall's Committee

*See page 292 et seq.

in respect to most if not all the subjects of instruction. Sound training in education is recognized as an essential. A personality which makes it possible for this person to influence people inside and outside the profession is a known essential. The increasing emphasis upon adult health education, the closer relationship between public health education and school health education, and the possibility that health education may become the basis of the public health program makes it increasingly important that the school health educator should have a thorough background of health sciences, a real public health perspective, and a good basic knowledge of public health education as it functions in the community at large.

* * * * *

Appraising Methods of Health Education—Recently the Elizabeth McCormick Memorial Fund of Chicago has made an effort to appraise some of the methods used in health education programs under its supervision, particularly those used in the case of programs conducted during a three-year period in a number of public elementary schools in Chicago and Joliet, Illinois.

From the findings reported, it seems safe to conclude that specific classroom instruction on health topics, supplemented by periodic physical examinations with advice to parents, is an effective method of health education for elementary-school children. There is indication that yearly conferences with a physician will stimulate sufficient interest on the part of both parent and child to produce an appreciable improvement in the child's health. When such conferences are accompanied by health teaching in the classroom, this improvement is markedly increased.

These procedures seem to be effective, not only in improving the average child's general health, but also in correcting specific bodily defects and establishing better health habits. This improvement in health is in turn reflected in a higher level of school achievement. In accomplishing these objectives, a comprehensive program of health education is more effective than one or two procedures used alone. Moreover, the longer and more continuously health instruction is carried on the more satisfactory the results are likely to be. Since the correction of defects and improvements of the diet and general hygiene of the home are primarily the responsibilities of the parents, the effectiveness of a health education program will depend upon the extent of the cooperation between the home and school. The results reported in this article show conclusively that, when the home and school work together, marked improvement in the health of the pupils can be expected. **Martha Crumpton Hardy, reprint from Elementary School Principal, Department of Elementary School Principals, N.E.A. Volume 16, Number 6, July, 1937, pages 390-398.**

PROFESSIONAL EDUCATION OF SCHOOL HEALTH EDUCATORS*

JOHN SUNDWALL, PH.D., M.D.
Director, Division of Hygiene and Public Health
Ann Arbor, Mich.

The professional education of a young man or young woman who anticipates a successful and effective career in school health education falls into three groups of studies:

1. *Scientific Education* — Substantial education in those sciences which acquaint one with the human body, its make-up or structure, its workings or functions including development and growth, and its protection and care.

2. *Pedagogy* — Studies of those subjects which acquaint one with the history, philosophy, psychology, principles, and practices of public school education, in order to make a genuine schoolman or schoolwoman out of the prospective health educator, and in order to meet the requirements for teachers' certification or licensure.

3. *Special* — Methods and Materials in health teaching. Special health problems and needs of the child. Healthful school living. School's health service.

I. SCIENTIFIC EDUCATION

Certainly, a working knowledge of those sciences which acquaint one with the structure or make-up, workings or functions, and the care of the human body-machine, should be regarded as the primal requirement of the candidate for a position of teacher or supervisor of a public school health education program. Studies of human anatomy, both gross and microscopic, including embryology and genetics, acquaint one with the make-up and development of the human body. Knowledge of the workings, functions, and growth can be gained only through studies of physiology, biochemistry, and psychology. To know how to take care of the human body-machine, one must have had substantial education in the fundamentals of physiologic or individual hygiene, and of community hygiene for a population group as a whole, or for special groups such as industrial hygiene, as well as in those sciences which acquaint one with the nature of morbid processes which incapacitate or destroy the body; namely, bacteriology and general pathology. The courses in hygiene and their contents which should be pursued in order to qualify for school health teaching and supervision may be put down as follows:

1. *Physiologic Hygiene* — Physiologic, personal, or individual hygiene should include due consideration of the following factors:

*Abstract from the Report of the Committee on Professional Education of the American Public Health Association on the Educational Qualifications of School Health Educators as published in the American Journal of Public Health, Vol. 27, No. 7, July, 1937, Page 711. Presented before The American School Health Association, Kansas City, Missouri, October 27, 1938.

(1) Air — modern conception of ventilation including shelter — housing, clothing; (2) Water — physiologic and daily hygienic needs; (3) Nutrition — the balanced diet, as measured in terms of proteins, carbohydrates, fats; vitamins and minerals; (4) Light — illumination, ultra-violet rays; (5) Body poisons — bacterial poisons, drugs, chemicals — industrial hygiene; (6) Mental hygiene and the social and economic factors involved in body-mind-emotional disorders; (7) Mechanical world — with particular references to violence, injury, accidents; (8) Periodic health examinations; (9) Nature — early detection, correction or control of body-mind-emotional defects which are prone to come on during the several age periods of life; (10) Special physiology and hygiene of the several systems in the body including the sense organs and sex physiology and hygiene; (11) Physiology and hygiene of exercise; and (12) Rest, sleep, and avoidance of fatigue.

2. *Community Hygiene* — One's knowledge of the principles and practices of community hygiene must be built on a course in general bacteriology, and should be gained in the pursual of a general course in communicable diseases and epidemiology which includes the following topics: (1) Nature and classification of parasites responsible for communicable diseases; (2) Source of communicable disease — man and animal; (3) Principles and practices of direct and indirect contact infection; (4) Classification of parasitic diseases according to discharges; (5) Routes over which communicable or parasitic diseases are disseminated; (6) General methods for blocking these routes, including water purification, sewage and refuse treatment and disposal, food and milk control, and eradication of diseases conveying insects; (7) Specific procedures for blocking certain communicable diseases including the classification and use of biologics; (8) Epidemiological procedures.

3. *Public Health Administration* — Certainly one who anticipates a career in health education — whether public school health education or adult public health education — should possess a working knowledge of public health administration or applied hygiene; the principles and practices of physiologic hygiene and of community hygiene as applied to a community as a whole or to maternity and infancy, to children including school health work, and to adults including industrial hygiene. The special interests and activities and personnel of a public health department, including public health statistics, epidemiology, sanitation, laboratories, public health nursing, and so on, should be familiar to one who anticipates a career in school health education, not only for purposes of instruction but also for tying up more closely the health interests and activities of the school with those of the local health department. Some field observation and work is highly recommended.

II. Pedagogy

The teacher or supervisor of a public school health education program should be a genuine schoolman or schoolwoman in every respect, or who "understands and can speak the language of public school education", one versed in and permeated with the spirit and atmosphere of the public school educator. Therefore, studies in the history, philosophy, psychology, principles, and practices of education should be followed with a view of meeting the requirements for certification and with a view of becoming permeated with the atmosphere of public school work. Teachers or supervisors of public school health education should meet the same requirements for certification as are now met by school men and school women in general.

III. Special Education

1. *Methods and Materials in Health Teaching* — The school health educator should be familiar with methods and materials in health teaching. Many studies and contributions in recent years, have been and are being made to health teaching in the various grades, both as independent instruction and in correlation with other school subjects and of the rôle that the classroom teacher should play in the school's health program. Obviously, all these matters pertaining to health teaching should be given due consideration in a course or courses prescribed in a professional curriculum for the training of health educators.

2. *Special Health Problems and Needs of the Child* — Special education and training relative to the health needs of the child are required of him or her who is to function adequately in school health teaching and supervision. A course or courses should be presented with a view of correlating and applying those medical-health sciences specified above (Scientific Education), to the living, growing, dynamic child. Due consideration should be given to the significant changes in structure and function throughout the period of growth of the child and with its health needs arising out of conflicts between environmental factors and the child's growth and developmental needs. Such special health factors as nutrition; mental hygiene, including personality and child guidance; periodic health examinations; prevention, early detection, and correction of defects; protective inoculations; school epidemiology, and sanitation; should be given their due consideration in this course.

3. *Healthful School Living* includes such factors as the hygienic planning or arrangement of the school program, teacher-pupil relationships, interest in the whole life of the child, home and school, with a view of doing something salubrious about it. Interests and activities for healthful school living may be regarded as the "doing" or laboratory phases or aspects of health teaching.

4. *School Health Service* — The interests, activities, organization, and administration of the school's health service should be

an important part of the educational and training equipment of the school health educator. The health service should be regarded as another of the "doing" or laboratory aspects of the school's health program. Some would combine the interests and activities of healthful school living with those of the health service. Naturally, the relation of the health service to the family physician should be duly considered. Of course, in school health programs, it is desirable that health teachers participate to their fullest capacities in the "doing" or laboratory phases of a school health education program. Likewise, those whose interests are primarily in the health service work should take part in teaching. Both principles—teaching and practice-participation should be expected of all who take part in the school health program. Those who participate in the school health program as teachers or supervisors should be alert to the health aspects of living in the school, and have a responsibility also for guiding classroom teachers not only in the recognition of health problems, but also in the effective handling of them. It is understood that this education and training specified under "Special Education" should be so presented that the student will possess a clear picture of a correlated and balanced school health program as a whole, both in respect to health teaching and to administration of the school health program.

If we accept the proposition that these 3 groups of studies, (1) Scientific Education, (2) Pedagogy, and (3) Special Education, should be regarded as essential for the preparation of the teacher or supervisor of school health education, it is obvious that the professional education of the school health educator should be done in a university in which the so-called basic health and medical sciences are offered; namely, anatomy, physiology, bacteriology, pathology, and hygiene, and in which a department or school of education is maintained or in other institutions of higher learning where close cooperation exists between those teaching units.

IV. Undergraduate Work

The college work should be on a broad cultural basis. However, if one anticipates, and plans his studies for a career in health education early in college life, the necessary physical and biological sciences may be adequately pursued. At any rate, substantial courses should be completed in physics, chemistry, and biology. If possible, biology should include vertebrate anatomy, physiology, and a general course in bacteriology. General courses in psychology and sociology should be completed.

The senior year or a portion thereof should be devoted to studies, offered in the department or school of education in the university, along the lines of the history, philosophy, psychology, principles, and practices of public school education. It is assumed that practice teaching is included. The prescribed or recommended

courses which will qualify one for the teacher's certificate or licensure should be completed. In other words, according to this recommended course of study in the college, the student has been educated and trained for a career as a public school teacher with a major in the biological sciences and a minor in the physical sciences.

V. Graduate Work

The admission requirements (Bachelor's degree) to the graduate school should specify the completion of substantial courses in the physical and biological sciences and in pedagogy according to the recommendation made relative to undergraduate work. At least one year of graduate work leading to the degree of Master of Science in Public Health or School Health Education or an equivalent degree or certificate is recommended.* The following graduate program of study is recommended:

Sciences — Those sciences which acquaint one with the structure, functions, and care of the human body.

1. Anatomy — Gross and Microscopic — Embryology
2. Physiology, including Biological Chemistry
3. Physiologic Hygiene (Personal Hygiene)
4. Pathology (Bacteriology prescribed for entrance)
5. Community Hygiene
6. Public Health Administration

School Health Program — Organization and administration of comprehensive and constructive school health programs including:

1. Methods and Materials in Health Teaching
2. Special Health Problems and Needs of the School Child
3. Healthful School Living
4. The School's Health Service

It is recognized that the program of study offered as graduate work will be varied in accordance with the undergraduate education and training of different students.

VI. Practical Experience

One cannot emphasize too much the importance of supervised practice teaching of health and of directed participation in the "doing" aspects of the school's health program, including activities for healthful school living and those of the health service, in order fully to qualify as a school health educator. Therefore, a term of directed practice and experience in a recognized school health program should be included in a professional program of study in school health supervision before the Master's degree is conferred.

*The tendency seems to be toward a special professional degree in Education, as Ed.M.

ADMINISTRATIVE RESEARCH IN SCHOOL HEALTH SERVICE*

JOHN L. RICE, M.D., *Commissioner of Health, New York City*
AND
DOROTHY NYSWANDER, PH.D., *Director, School Health Study*

I have visited many health departments throughout the country. But never yet have I seen a sign on the front entrance labelled "Help Wanted." However, health departments do want help. Many offers of help come to health departments, but frequently they are not such as can be used.

A kind of help which is very definitely wanted, and which is so difficult to obtain, is research assistance in administrative problems. Let us call this "Administrative Research." Supposedly, this is simply a supervisory matter, and health departments do have supervisors, division chiefs, and bureau heads. But supervisors have their hands full usually with routine matters. Rare is the health department that has available a capable, free-lance person who is not tied down to routine duties. Here is an opportunity for private foundations to supply research assistance in a most active administrative laboratory, a department of health. And such assistance can be put to immediate practical application. Administrative research in the field, where the practical problems arise, provides the material for building from the ground up. It is a constant source of enrichment of the program.

The New Work City Health Department has been extremely fortunate in having just this kind of assistance made available. In the instance about to be described, another city department is also being aided — the Department of Education. These two departments share an administrative interest in the health of school children. The Health Department directs the medical, nursing, and dental work in the schools, and the Department of Education has the responsibility for health and physical education.

Here we have a situation which makes even a stronger argument for the creation of an independently supported unit which can to advantage impersonally address itself to the interlocking problems confronting two departments.

In 1936 an administrative research unit was established with the joint support of three organizations — the Metropolitan Life Insurance Co., the Milbank Memorial Fund, and the Liquidating Committee of the American Child Health Association. A sum of ten thousand dollars was pledged annually for a period of four years. An advisory committee was formed, including representatives from the three supporting organizations, and the Department

*Presented before the Joint Session of the American School Health Association and the Public Health Nursing Section, A.P.H.A., Kansas City, Mo., October 25, 1938; read by Dr. Rice.

of Health, Department of Education, the Committee on Neighborhood Health Development, and other interests.[1]

A previous study of the school health situation had been made in 1932 and 1933 by the American Child Health Association, and published under the title "Physical Defects — The Pathway to Correction." This study revealed certain shortcomings in the service, and remedies were suggested.

It is one thing to know what is wrong. It is another matter to know what and how to do something that will be better. Corrective measures can be reasoned out and put into effect generally, or they can be actually tried out first in a limited area. In a city with a million school children, particularly, it is far safer to experiment in a small district first before risking the confusion of changed records, regulations, and procedures that involve thousands of teachers and hundreds of school physicians, dentists, and nurses.

The new study was organized to try things out in practice, first starting from the recommendations of the previous study and widening the scope of the inquiry as experience dictated. The laboratory chosen was first one school and then eight schools in the Astoria Health District of the Borough of Queens.

At the outset, both city departments agreed to declare this experimental area a free district, released from rules, regulations, and prescribed procedures, so that innovations could be introduced without being paralyzed by red tape. The director of the study was allowed to formulate and put into effect her own rules and procedures.

The staff of the study, consisting of director, statistical assistant, and stenographer, was supplemented by a supervising nurse[2], secured for a limited period from the National Organization for Public Health Nursing, and at the beginning of the second year it was possible to add the services of a pediatrician.[3] These services were secured as a cooperating project through the assistance of Social Security Funds approved by the United States Children's Bureau and the New York State Department of Health. Valuable assistance, too, was rendered by the Division of Health and Physical Education of the State Department of Education in assigning two of its field supervisors for short periods of time to work on problems of teacher participation in the school health service program.

A starting point was to recognize that school health service calls for team action. It doesn't do for the medical staff to plan,

[1]The committee personnel includes Dr. Philip Van Ingen, Chairman; Dr. Donald B. Armstrong, Vice-Chairman; Dr. George T. Palmer, Secretary; Mr. Kenneth Widdemer, Treasurer; Dr. Louis I. Dublin, Dr. Haven Emerson, Dr. Bailey Burritt, Miss Dorothy Bildersee, Mr. George H. Chatfield, Dr. John L. Rice, Dr. Charles C. Wilson, Dr. I. Ogden Woodruff, Dr. C. M. Derryberry, Dr. Paul A. Kennedy, and Dr. Albert K. Aldinger.

[2]Miss Ella McNeill, assistant director, National Organization for Public Health Nursing.

[3]Dr. George H. Wheatley, Pediatric Department, New York Post Graduate Hospital.

independently, or the nursing staff to do its own planning, or the principal and teachers to work by themselves. The work of all these groups is so interlocked that there must be joint understanding and planning. These people first had to be reintroduced to each other and encouraged to plan together. Throughout the period of the study this principle has been followed. Recommendations are the outcome of joint thinking and experience, each person concerned having the benefit of the other fellow's position and point of view.

A report on the first year's work of the study was presented last year by the Director of the Study before the Child Hygiene Section of the American Public Health Association. We now propose to review some of the points there covered and also to enlarge on some of the later experiences, particularly from the point of view of the senior author.

The program for giving medical examinations in New York City in 1936 covered all entering children, most of whom are in kindergarten or the first grade, the children of the eighth grade, and referred cases from any grade. In addition to the medical examination, there had also been carried on for a number of years a Health Day examination of pupils twice a year, at which time teachers went over their children and recorded observations on various points, including such items as vision and tonsils. On the strength of these recommendations, direct approaches were made by the school staff to the families in the effort to obtain corrections. Thus we had two independent approaches to families, the nurses not being aware of the teachers' approaches to individual families, and the teachers not being fully informed of the approaches of the nurses to families.

The research unit, after extended observation, proposed a practical and satisfactory solution to this undesirable situation. The Health Day sheet in the experimental area was revamped so as to relieve teachers from passing on more strictly medical matters, and substituting in their places observations which the teachers were not only best equipped to give but which the teachers by their intimate daily contact with pupils were the only ones capable of giving. These related to behavior and appearance and illness, and absence because of illness. Furthermore, this work was geared into the medical and nursing program so that children selected by the teachers were referred to nurse and physician for confirmation before approaches were made to the family. This study has shown that teachers do select children needing medical attention in a very satisfactory manner. Hitherto teachers and principals were given little or no access to medical and nursing records. This was changed, and in spite of grave doubts upon the part of many, teachers were invited to consult the medical records to inform themselves about their own classes.

More recently, an individual Health Card instead of a class sheet is being tried out. The usefulness of a class sheet is limited to a single term while a class is in that room. The individual card has the greater utility, in that it can be transferred to another room along with the pupil. The desirability of this change, dictated from several points of view, was determined by an actual sounding out of the views of teachers. This double examination service was thus unified to the satisfaction of all concerned.

The medical examination, improved though it was in many particulars during 1934 and 1935, still was open to many criticisms. The physician examined a child before a roomful of other children. The nurse was occupied in marshalling the children. The examination was centered on diagnosis. Little time was spent in explaining findings to the mother or planning future care to benefit the child. In short, even with the parents who were present, the physician generally failed to utilize the opportunity as an educational experience for mother and child. There was missing a real opportunity for the physician to talk directly to the mother. Instead, the nurse was expected to go to the trouble of making a home visit to convey information secured second-hand that could have been given first-hand by the physician.

The research unit changed this practice. Special efforts were made to induce more parents to attend. Different forms of letters were experimented with, to arrive at a more successful form of appeal to the parents. Physicians were encouraged to make the most of their contact with the parent, to be friendly and communicative, to learn something of the development history of the child, to get away from the gruff clinic attitude, to be helpful, and to refrain from such questions as asking about relief status or ability to care for the child when others were present.

The examination was made in seclusion, with only the doctor, parent, child, and nurse present, and the teacher too if she so desired. Only one or two children were kept waiting their turn and not a roomful of children. The nurse was brought into the picture to record notations for the physician and to receive personal instructions then and there as to the follow-up program. And the nurse was encouraged to ask for information in order to give herself full understanding of what needed to be done.

Another point was brought out. The physician sees one side—the examination setting in the school. He is not familiar with the home. His recommendations to both nurse and parent are limited by his restricted understanding. The research unit sensed this situation and experimented with a plan of sending the physicians into the home to obtain a fuller picture of the child and his surroundings. This experience in the experimental area was so promising both from the standpoint of obtaining a broader understanding of individual situations and as a means of heightening the in-

terest of physicians in their examination work, that a similar project was followed in the entire city system.

The plan called for home visits to be made by 150 school physicians on some 5000 children in New York City who had been diagnosed as suffering from malnutrition. This experience has widened the horizon of the examining physician, giving him first-hand knowledge of the kinds of homes and families in which the children live. In many instances it has made him aware of the impracticability of his previous recommendations for the care of the child. With this new insight, he is in a much better position to guide the nurse and the family as to what corrective measures may be carried out successfully in the home.

Another change was to break down the barriers so that a teacher could consult with the physician directly, and the physician in turn could become familiar with the benefits to be derived from the teacher's participation in the health program within the classroom.

Then there is the relation of the school medical staff with the private practitioner. Neither understood too well the other's point of view. Now, when differences arise, the school physician is instructed to convey his point of view directly to the private practitioner. In spite of reservations to the contrary, both nurses and physicians have visited private practitioners directly to discuss a case and have encountered a courteous reception and an eagerness to understand better the aims and procedures in the school health program.

School nurses as well as school physicians have their hands full. But the close scrutiny of the study has brought out certain opportunities for time saving on the part of both. In fact, one of the main objectives of the study has been to define the responsibility of principals, teachers, physicians, and nurses. And in defining these responsibilities, much overlapping in activity has been eliminated. Hitherto all terminations of follow-up had to be passed on by the physician. This blanket order is unnecessary. Hereafter, in the experimental area, dental cases need not be referred to the nurse and then to the physician. Instead, they may be terminated directly by the teacher upon presentation of a certificate of correction from a recognized source. The list of such terminations is transmitted to the nurse. Vision cases may be terminated by the nurse directly on receipt of a certificate from a recognized source that glasses are correct. Tonsil cases may be terminated upon receipt of a certificate from a physician stating either that the tonsils have been removed or that an operation is not necessary. Where the nurse is in doubt she may then refer the case to the physician.

The bane of the nurse is records. Can we lift some of this burden from her shoulders? The research unit tackled the problem of filing. Dead files were brought to life. Cards were reclassified.

The long time spent in locating cards was shortened. A new plan of handling cards at the time of mid-term transfer of children was adopted. Here, in a single day, a job was done handily that formerly a nurse had worried over for months.

The new system of filing now makes it possible for the nurse to use her cards effectively when talking with teachers. It also tells her *what* she is supposed to do about each child and *when* she is supposed to do it. This has been accomplished by putting colored tabs on the cards and setting up a tickler file. One color indicated a "home visit", another "see the teacher", another "see the physician." All these changes simplified her work and removed a great deal of the headache and discouragement from the handling of records.

The research unit brought to light too that from a third to half of the medical cards were lost, largely as the result of the transfer of children to other schools. A cumulative card that was supposed to follow the child from room to room and school to school throughout his school career was just not following that course. The transfer machinery was not geared to the actualities, namely, that a third of the school children in New York City move from one address to another annually. This astounding shift in population had wreaked havoc with school health card files. By changes in procedure, whereby the medical card goes along with the school class card with the child when he transfers, this tremendous loss of cards has been very largely ended. As a further step in making this card transfer routine successful, it is necessary that there be a card for every child, regardless of whether the child has had a medical examination or not. Such universal card coverage has now, thanks to the interest of the nurses, been established throughout the city.

What does a nurse record on her card after a follow-up visit? There were some surprises for us here. It was pretty meagre information. "Advised mother" was a common entry. It may have meant something to the nurse that recorded it, but it didn't convey much to the next nurse who made a visit, or to the physician, or to the teacher. Of course, a nurse cannot be expected to record a two-page story on two lines of a card but she can give a brief clue to the principal outcomes of her visit. This has been tried. It is practical, and the nurses in the experimental area are now recording a more intelligible account of their activities. Either this must be done or we shall be tempted to doubt the value of the time and energy spent in many visits.

By the way, we have done what probably all of you have done at some time, that is, devised a new medical card. This is purely in the experimental stage. But it looks good. We have cut off items that never did mean much. We have room to write and facts are placed together where they can be found. It is too early yet to do any boasting, but we are optimistic as to its usefulness.

Another point had troubled us. We have eye clinics, dental clinics, heart clinics. They each have their records, but somehow or other the essence of what transpired in these clinics rarely got back to the regular school medical card, and the special hearing surveys with the audiometer were largely an exclusive and carefully guarded story. The news never reached the general medical card. Often it didn't reach the teacher's record card. This shortcoming has been largely remedied.

Two years have now elapsed. Many valuable changes for the better have taken place in the experimental district. Are these benefits being carried over to the system as a whole? This is a problem with 800 nurses and 200 physicians and 200 dentists and dental hygienists. Some instances of city-wide adoption have already been mentioned. Other steps in this direction have been taken. For six weeks in the spring of 1938 a series of institutes was held for group discussion between the research unit staff and all district health officers, supervising nurses, and physicians in charge of district school work. The groups were limited to 15 members. An instruction manual was distributed, aims and plans were explained, inefficient procedures were described, the reasons for changes and the merits of changes discussed. This has permeated down to the field staff with varying degrees of success. That it is having its effect, we are confident. This year, with further Social Security aid, another pediatrician is available to contact the school physicians and nurses in the field and help them provide a better service. New instructions have been issued to the entire staff this fall, incorporating some of the outcomes of the experiences in the experimental district.

This common interest on the part of two city departments—Health and Education—an interest which binds the two closely together, resulted last fall in the formation of a Joint Committee on School Health Affairs made up of representatives of the two Departments and the parochial schools, as well as the United Parents Associations, the Public Education Association, a leading pediatrician, and the research unit. Puzzling and troublesome matters have been discussed frankly around the table. Each department understands the other better. We see more eye to eye. We can get things done more readily. This augurs well for the future.

It is only the high spots of this work that have been described. These attainments have been reached only after innumerable, painstaking check studies on the many minor aspects of various procedures. It has meant endless conferences, individual and group, attendance at public meetings, discussions with the many individuals concerned, all in the interest of getting different points of view, of harmonizing points of view, of keeping people informed, of carrying people along with a common interest and toward a common objective.

THE SCHOOL NURSE AS A HEALTH EDUCATOR*

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Schools Are Basically Educational Agencies. If the purpose of all education is to help each individual to acquire the intelligent art of living fully and well, then whatever health work is sponsored by a school system should be of an educational nature. Such education will fail to function unless the principles presented to the learner are accepted by him as important to his welfare, and unless he willingly puts what he accepts into use. Functional education is one of the slowest processes known, and frequently health workers grow impatient. They then turn to peddling out service, or resort to coercion to accomplish the results they are seeking.

If we were to analyze the factors which are important to health, almost at once we would note the environment as one of the most important. The child at school, as well as the child at home, must depend upon the adults in his home and community to provide the type of environment in which he best can grow. The child has very little influence over his mode and place of living, so, in spite of what the school teaches him about environment, he must still depend upon those older than himself to provide the material needs of his life. The school first can provide within the school the best physical environment possible, and then teach both children and adults of the community what constitutes a satisfactory environment and how improvements can be made. The school has no coercive rights to force changes in modes of living. Palliative measures will not, in the long run, pay such dividends as will the slower processes of real education.

Another factor in the child's life which most of us concede as of vital importance to him, and upon which most of our present health education has been based, is the group of so-called health habits. Habitual health practices tend to develop in proportion to the adequacy of the equipment provided, sympathetic encouragement for and the amount of insistence upon regular performance of a given task. Again, the adult is responsible for these and, at best, the school can only assume its responsibility for seeing that those health practices which need to be followed by the child while in school are followed, and to teach a limited amount of information to the child about health behavior. To overstress health teaching when health promoting practices are impossible, more frequently than not, results in negative reaction to the whole regime. In the course of a ninth grade boys' hygiene class, one lad made a

*Read at the Joint Session of the American School Health Association and of the Public Health Nursing Section of the American Public Health Association, Kansas City, Missouri, October 25, 1938.

remark that his mother would like to feed the family correctly. He said that she read menus and then realized she could not afford the foods mentioned. The boy was frankly discouraged.

A third factor brings us to the area of much confusion in thinking and, therefore, to much disagreement in policy. This consists of the prevention and correction of defects, infections, and sources of strain. Certainly, in the face of the present national dilemma on medical care, few would dare to express an opinion as to what the school will be asked to assume in its future health program. Personally I hope that the schools may be asked to keep their activities within the original bonds of education. I am not suggesting that the schools take a side in the controversy, but as resources and new avenues for additional health care are developed through other community agencies, the schools should teach people how to make use of these facilities.

Health education is, at best, only partially successful unless the end result of the health program is a satisfactory emotional attitude of the individual toward his limitations as well as toward the potential abilities placed upon him by heredity and environment. This may be termed mental hygiene if you wish. The school should recognize that there is a great problem existing in an individual's adjustment to an unpredictable social environment. School people are too prone to think that wonders can be accomplished in the six hours of the school day. I am not so optimistic. What happens during the other eighteen hours of the day may enhance or undo the work of the school. This depends upon the degree of functional education the school has been able to accomplish, not only with the child but with the adults who manage the child's world.

The Contribution of the School Nurse to the School Health Program—Usually about the only full-time health worker found in schools is the school nurse. Her three years of basic hospital training is apt to have made her a follower instead of a leader, hence her advanced preparation must offset this psychological attitude. Upon entering school work, many nurses feel inferior to the teachers in spite of the nurse's superior knowledge as to what makes for health. The nurse has already, or soon learns, the techniques of measurements which are used in determining some of the aspects of health. These include sight and hearing tests, weighing and measuring, and the techniques of recording her own or the physician's findings of the deviations from normal body structure. She also has learned how to do a good job of taking care of the children and frequently finds it easier to take care of the child herself than to teach someone else to do it. Too frequently she is unwilling to let neglect exact its just toll. She fears the danger to life. However, one might well ask what happens to the child during the other eighteen hours of the day outside of the school, unless the child or

his parent knows what to do. Experience under guidance is an excellent teacher.

A school health program based on health education needs personnel prepared to see in their work many educational possibilities. A big problem of a school system, which desires to base its health program on education, is to find a nurse prepared not only in the routine work as given above but who can also measure up to the following standards:

1. The nurse shall be able to evaluate the educational assets and weaknesses of each of the routine procedures which she is required to do. For instance, she shall see the educational meaning when she weighs a group of children, or the educational handicap of the deaf child.
2. The nurse shall know what community resources are available which, if put to proper use, may make the life of those with whom she deals more worth while.
3. The nurse shall know how to compile her records in such a way that the community shall know the health needs and status of the school population. She shall know how to teach key people about what she has found and how this knowledge may be used most wisely.
4. The nurse shall know when to shed responsibility on to the shoulders of its rightful owner. She is not a prop, but a guide to a more self-sufficient life.
5. The nurse shall know how to make each contact with a child, a teacher, or a parent of real value, in that the individual feels better able to cope with the situation should it again occur.
6. The nurse shall evaluate all she does as to its real worth, eliminating all "busy work" done to fill in time and tend to pad reports, and shall create, when necessary, new and better ways of doing her work.

In conclusion, a nurse with certain routine duties to perform will produce findings which should be of real value to somebody else in the school system. The findings themselves are valueless until someone uses them. The nurse is responsible for finding that which is good or bad as it relates to health, but the changes necessary for betterment are usually the responsibility of somebody else. The nurse is a health educator only when she can get others to assume their responsibilities.

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HEALTH TEACHING IN THE GIRL SCOUT PROGRAM

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It is the purpose in this study to show that health teaching has or should have a very large place in the Girl Scout program. Health can be made interesting to children of any age if properly presented, and, through such a program, the community may derive much benefit.

The following paper is intended to show the correlation and coordination of all of the second and first class scout requirements into one big project. The old program was used as a basis because, at the time of writing, the information regarding the new was not available. Many of the examples in this paper are taken from local conditions which may be paralleled in any community.

The amount of material used at any one time in a troop should be dependent on the needs of the individual girls. Other projects may, of course, be carried on simultaneously.

Our troop[2] began a study of the "five points of health" as a beginning of this project. The health material in the "Girl Scout Handbook" was read by individual girls and a group discussion followed as to the reason why proper food, clothing, fresh air, sunshine, and exercise are necessary for good health. They also discussed what they thought constituted a fairly good health rule to follow in each case, and each girl checked herself to discover how near she was to measuring up to the standards set up by the group. The girls became interested in discussing means of furthering these health ideals and decided that advertising was a worthwhile way.

Posters were decided upon in the group, and a discussion followed as to what constituted good poster making. Group poster work is usually of interest to girls, so it was suggested that each patrol make five posters, one for each of the five health points. They were not at first enthusiastic over the idea, but after looking at several sample posters shown by the leader they became interested. The posters were finished in a very short time, so we turned to individual work in which each girl had a chance to show and express her own ideas. Health dictionaries in which they put health words, definitions, and pictures of each definition offered this means of self expression. No previous suggestions were made as to how this was to be done. The project was explained, and the girls told to see what they could do. Much enthusiasm developed over this, and the girls took keen delight in trying to have the best dictionary.

[1]Clarence, twenty miles from downtown Buffalo, has a population of about thirty-five hundred people. Ed.

[2]Girl Scout Troop 113, Clarence, N. Y.

The girls also kept a chart by means of which they checked on themselves daily in regard to health habits.

Next a posture discussion was carried on. Each girl made stick figures of correct posture, and made it a rule to remind other girls in the troop when they were not standing correctly, for they felt it spoke well for scouting to have a girl in uniform assuming correct posture at all times.

The study thus far included only children and adults, so we started to learn about the care of the baby. A nurse came in twice to give talks and demonstrations, using a doll. Several of the girls who were working on first-class scout requirements went at the business of working on Child Nurse as a result of interest created.

By this time, the girls, having a basis of fundamental health knowledge, started some practical surveys. The first was a survey of health aspects, good and bad, of the meeting places of the troop. This may differ widely, since some meeting places lack sufficient heat, others are damp. Our chief difficulty is dampness. By discussing the condition with the girls, and they in turn carrying the discussion into the home, we have a possibility of bettering this unfavorable health aspect, for a new hall is under consideration. If the situation is not too bad, the girls may be able to remedy it themselves.

Next the girls were asked to make a survey of their homes. In the troop meeting, they discussed a number of conditions that might exist that constituted poor health conditions, such as having a common drinking vessel near the drinking water supply. Also fire hazards were discussed, and proper procedures in case of fire. When reports were brought in, it was found, to the surprise of the girls that many improper conditions existed. Among these were piles of oily rags, and unscreened windows. Then the girls acted out a scene in case of fire in the home, showing how the fire company should be notified, precautions that should be taken, and how escape might be made through an upstairs window by means of tied sheets.[3]

Our next step was the wider field, the community. At the very beginning of this survey we found piles of rubbish beside inflammable buildings. This constituted a fire hazard, and might endanger property and even lives. Again an excellent opportunity arose to discuss what might be done if one of the girls should discover a fire at that point. Steps were taken to notify property owners and to point out to them the hazards.

To continue with this survey, we found a small creek that each spring over-flows its banks leaving much swampy land. A health menace always arises. The one most apparent to the community is often an ensuing mosquito pest. It was decided that by contact-

[3]The Girl Scout Handbook.

ing proper health authorities this condition might be abated by oiling the boggy land, especially where puddles were left in low spots.

This condition offered excellent opportunity for the girls to find out what kind of mosquito is harmful and to discover facts about this pest. They also became interested in many other types of insects that were to be found in this stagnated water.[4] Also the girls were interested in finding out all they could about the "peepers" that first appear in the spring and later big frogs, and what would happen to them when their water supply dried up or was oiled. Many varieties of birds were attracted by this bog, and the girls spent much time watching them and finding out what attracted them and where they lived.[5] In this same connection, an investigation was conducted as to which water supplies were polluted. It was found that none of them were affected by the flooding, but an interesting study developed as to the harm that might result if such were the case.

It was found that many cellars were flooded regularly, and a discussion was carried on as to the harmful effects and what should be done in this connection.

The older girls decided to try to devise a means of preventing this annual flooding. They planned a hike along the stream. One group went up the bank and another group went down along the bank. They reported any findings to each other by use of signal flags. In this way, both groups were aware of the conditions at both ends of the stream. Measurements were taken and observations made, so that a map could be drawn. They found their way back across country by means of a compass to an agreed meeting place. Here they had lunch and made reports.

Then they made maps of the area, and finally set up a model of the stream. It was decided that if the stream was dammed at a given point, the water could be conducted into larger streams some distance away. The girls made estimates of costs.

While making this survey, the girls had noticed an old bridge about to fall, across which children might make a short cut to school. They also discovered that a ledge where many of the children had been hurt was not posted. Some wood was secured to be used as stakes, and the younger girls made "Danger" signs, while the older girls constructed the stream model.

In this survey work, several of the girls acquired cuts, slivers, and other minor injuries that offered excellent first-hand material for teaching first-aid by letting the girls give treatments under the direction of all others looking on and learning as much as possible

[4]Insects of Eastern North America, E. O. Essig.
Field Book of Insects with special reference to those of Northwestern United States. F. E. Lutz.

[5]Birds in America. F. G. Ashbrook.

by observation. As a result of their experiences the troop wanted to make up a first-aid kit for hiking.[6] Meantime, the girls acted out First-Aid playlets in which the injured person was treated, then removed to a bed under the Doctor's care, and the need arose for making up the bed and caring for the patient.[7]

Some members of the troop had been taking swimming lessons, and asked how pool sanitation was cared for. The swimmers made inquiries, and the rest of the girls sought state laws and requirements. This study was very interesting to the girls, so a trip was planned through the pool. One of the staff members at the pool conducted the tour of the plant and made explanations. Some of the girls attempted to build a model pool. It was very interesting work though not too useful. As a result of this study and visit, several girls made plans to take swimming lessons.

Up to this time, the troop had been making a survey for itself. Now they started out to see what someone else might be able to tell them about health. They were interested in visiting a dairy farm and learning how the animals and the milk are cared for. At the same time, the person in charge explained the care of some of the other animals, and of the farm. Reports were written regarding all of these things.

From the dairy farm, the girls went to a pasteurization plant to follow through the can of milk to the time of its delivery. After finding out all of this and discussing the food value of milk, each girl was encouraged to make one milk dish (custard, pudding, ice cream) at home, and report on her success.

Since there was a variety of dishes, the girls wanted to exchange recipes. Then they became interested in finding out about other foods, and they planned a supper meeting, in which food cooked by the girls was brought from home. Each girl was given a chance to help prepare one dish and help at the table. In planning the meal, previous instructions were given the girls in regard to table setting and decorations and food preparations. Making favors and decorations took quite a bit of time, but offered an interesting hand-craft project. Since each girl would need an apron, they were encouraged to make aprons, and plan to have a contest that night to see which one had been made most attractively.

This meal proved to be so much fun for each member of the troop that they started preparations for a meal in the open. Stress was laid on differences of food preparation and handling, water supply, wood supply, and sanitation, cleaning up, and so on.

This experience led to the request for an overnight hike. Plans were made by the girls. They discussed camp sanitation, food sanitation, and general camp health, in the light of what they had al-

[6]Girl Scout Handbook, Chapters IV and V.
American Red Cross First Aid Text Book.
[7]The Girl Scout Handbook.

ready learned. Tents were taken along, and a leanto constructed. Then useful camp articles were made.[8]

All the work done during the year was summed up at the final meeting, and a talk given with emphasis on paralleling this work the troop had done with that done by the nation as a whole, showing the results to the nation as a whole, by comparing our death rate and disease records, etc., with those of other nations. The health officer gave this talk. He had been previously informed of the work done, and so had a basis on which to work.

The conclusion was made at this meeting that our country is a rather good one in which to live. Enough of a spirit of patriotism was developed as to lead to discussion of the proper display and use of the flag.[9] The singing of the "Star Spangled Banner" followed.

The parts of this project that have been used in our troop have been very enthusiastically received by the girls. The vast amount of related material seems to have a great deal of interest for them, and often they themselves will present material to be taken up by the entire troop. Such material as this serves very well to use then, since projects suggested by them are always of more interest than artificial situations that might be set up.

Conclusion: It will be found by careful consideration of the material in the preceding paper that all of the first and second-class requirements except that of training a tenderfoot have been touched on, though not entirely completed. It is hoped in the use of the project that the girls will have developed enough interest in the work to complete required material outside of the regular meeting time. This material is to serve the purpose, in most cases, of motivation, if this project is followed.

By the use of some such project as this, it will be found that the girls who have a more real interest in what is often merely a group of unrelated, somewhat uninteresting material. Through the use of some such project as this, it will be found that the girls can be made to see that what they are learning has a real and practical value in every day life. They will also have the feeling that they have actually accomplished some real good in the community, and will have something lasting to show for their work.

A project such as this also serves to train the girls so that they will know what to do when, in later life, they may see some health menace that needs to be remedied. They will know what health authorities to contact, how to go about making this contact, and what requests they might make.

This paper was not meant to give specific material, but rather to suggest lines of activity that might be studied.

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[8]Girl Scout Camp Administration. Minimum Standards and Waterfront Safety.
Day Hikes.

[9]The Girl Scout Handbook.

EDITORIALS

As one reads the first two articles in this Journal, the idea is driven home that for the best results in the field of school health a new type of personnel must be evolved and trained. The program for school health has become so broad, it has so many facets touching other phases of the broader program for education, it has become so complicated in concept, supervision, and administration, that it is no longer advisable to take some specialist—who is a specialist only—and put him or her in charge of a broad school health program, which is made up of at least the five fields; health service, health education, physical education, special education, and mental testing; a program that—in our large cities at least—needs to use personnel from a score of specialties.

For a number of years, specialists in general educational administration have found it necessary to "go to school," to take University work—usually at the graduate level—so as better to understand the "why" and "how" of supervision and administration. Today, principals and superintendents need—and in the educationally most advanced communities must have — this definite training.

Specialists may be compared to certain other vertebrates; they constantly yearn to reach the seemingly greener grass outside the fence. This is a natural desire, since it often means professional and financial advancement. In the field of school health, however, we have now arrived at a condition where superintendents, boards of education, and taxpayers should insist that, as a prerequisite to advancement to the broader field, special technical training must be secured to broaden the specialists' vision, to make him more conscious of the needs of other special fields, and to help him to understand how these various parts of the school health program may be made to fit together and to function.

Knowledge about health is useless to the individual, unless he uses that knowledge to build better health habits for himself or for those with whom he comes in contact. In health, perhaps more than in any other phase of living, it is not what we know, but what we do that counts. Health knowledge is quite useless unless it modifies advantageously a person's habits and procedures. In the field of health, we have had and still have, too much of doing things for or to people instead of training and educating them to do things for themselves.

School physicians, school nurses, and others of the school health personnel, should take a more active interest and a more vigorous part in health instruction, even though they may not be

definitely assigned to teach that subject. To be sure, this requires some knowledge of methods of pedagogy, but not such an intensive knowledge as one might imagine. The article in this issue on health teaching, while designed for the Girl Scout program, has many suggestions that might well be adapted to almost any health teaching attempt. It shows too, that good health teaching is perhaps even more easy in small town situations than in city ones. After all, health teaching is largely a matter of enthusiasm, alertness, and that rarest of human faculties—"common sense."

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ABSTRACTS

The Nurse In a Junior High School—School health programs have grown increasingly complex in the last ten years. Broad programs involving cooperation between teachers, administrators, pupils, doctors, and nurses have replaced the simpler plans where physician and nurse assumed full responsibility for the health service and instruction in the school.

Nurses in particular have been called upon to perform new duties, and to relinquish functions that were formerly theirs. For instance, courses of study now contain units of health instruction on many levels, taught by regularly certified members of the school staff. Nurses are less frequently called upon to teach special courses in home care of the sick, child care, and similar subjects unless they have special preparation for classroom teaching equivalent to that of any other teacher.

The nurse has an enviable opportunity to give informal health instruction to teachers, parents, and children. She receives health referrals from teachers with questions about eyes, ears, posture, and skin diseases. She confers with the teachers concerning these problems, explaining the results of physical examinations, and interpreting the need for rest, for sight conservation, or for a change in eating habits. A new point of view on the part of the teacher may result from one such conference. Better management of classroom lighting may result, or a realization that rest should at times include physical education or exclude a solid academic subject. Little by little, through these efforts, great gains in health knowledge on the part of a faculty will result.

In some schools, the nurse readmits all students who have been absent due to illness. This procedure gives numerous opportunities for informal health instruction, at a time when the pupil may be in a receptive mood.

Special school projects offer another broad field in which the nurse may give indirect instruction to pupils and teachers. In one school, during the study of a unit on communicable disease by eighth-grade pupils, a demonstration is given by a physician.

Volunteer students receive vaccinations for smallpox and tuberculin tests—previous consent having been secured from parents.

Another common school health project is the routine health survey conducted by teachers. Here again the nurse contributes. She helps the teacher by showing her what to look for, and how to record her observations. Impressive, indeed, is the nurse's contribution when teacher after teacher learns how to conduct a survey, including eyes, ears, teeth, posture, skin, hair, and general appearance. From this time on, there will be numerous requests by the teacher to the physician for further information about children. Moreover, teachers will approve a flexible school program where health problems receive consideration. Every teacher becomes an intelligent functioning unit of the health program.

It will be seen that the nurse today fills an enviable position in the health education program of the school. Her teaching reaches every member of the school staff and all of the students. It is effective, because it is given to individuals and small groups when there is a desire for the information presented. Her educational opportunities are constantly increasing in number and significance.

Helen Hunt, Journal of Public Health Nursing, October, 1938. Abstracted by E. E. Kleinschmidt.

* * * * *

Health Registration of School Children—Twenty-five hundred mothers of school children joined the New York city school and health authorities when schools opened in September in the first health registration of the pupils. Members of the United Parents Association, the Queens Borough Federation of Mothers Clubs and other civic groups aided in the clerical work and interviewing in more than 600 schools. The registration cards identified each child by sex, race, and date of birth; gave the name of the family physician, and noted whether the child had had diphtheria, measles, whooping cough, or scarlet fever. Space was left for other information to be obtained from a medical examination. Mothers were urged to take their children to a private physician if they could afford to do so; if they could not afford private care, a request for health department examination and diphtheria immunization, if necessary, might be signed at the bottom of the card. Parents and guardians received a statement from Dr. John L. Rice, Commissioner of Health, explaining that a health certificate is required of each pupil on entering school, that vaccination is required by law, and that diphtheria immunization is equally important. Parents able to afford an examination fee received a card to be filled in by a private physician, and were told to return it within ten days. About 40,000 children were registered, a task beyond the capacity of the teachers, nurses, or any available clerical staff, it was said.

Journal A.M.A., October 8, 1938, page 1388.

Preventive School Health Service—I have always maintained that the separation of the sick student from well students as soon as he feels the least ill, and keeping him separated until contagion is passed, is the key to keeping students and school children free from contagious disease. In the past seventeen years not a day of school has been lost by the Eastern South Dakota State Normal School because of contagious disease. We have always had the popular slogan, "We are not afraid of germs when we know where they are," and we have made it our business to find out where they are before several students come down with the same disease. During this period of time, we have not had a student take a contagious disease from another one. In other words, our contagion has always been single cases.

When a neighboring educational institution without a student-health service had 250 cases of scarlet fever, we had just five cases during the year. A lapse of time from four to six weeks occurred between cases, showing conclusively that each had not been exposed to a previous case in school.

We could not have done this, except for the co-operation of the city, county, and state school officials who have jointly provided and maintained an isolation hospital where the first case of contagion is confined, thereby protecting not only the rest of the student body, but also the population of the city as well.

So well has this disease-prevention program worked that the entire public-school system in the city of Madison has adopted a health program patterned after that of the normal school. A school physician is appointed for each school. This doctor takes an inventory of the health of each pupil during the first school month, and is available for diagnostic calls by the teachers for every case of acute illness which might develop during the year. In this way, contagion is stopped before it has a chance to spread.

This physical examination includes examining eyes, ears, nose, and throat, chest for heart and lungs, extremities for deformities, skin for contagious sores, etc. Height, weight, pulse, respiration, and temperature are recorded by the nurse. A Mantoux test is given for tuberculosis, and if found positive, the student is tested for activity by further examination and possibly by X-ray. Active cases of tuberculosis are not allowed to attend school, being excluded the same as other contagious and infectious conditions.

The health card is so arranged that the findings for each year, from the first to the twelfth grade, can be recorded and compared.

In order to carry out a health program of this kind, it is necessary to have the full co-operation of the parents, and every pupil is required to have a signed consent from the father and mother. These consents read as follows:

"Our consent is hereby given to the school physician and the school nurse to make, without expense to us, such tests and ex-

aminations of our child (name) as are found necessary to promote better health in our school." This consent is dated and signed by the parents.

When the school physician finds a condition which requires treatment, he reports it to the teacher who looks up the history of the child and finds the family physician's name. The child is sent home, with the request to have the parents' own doctor called to treat the condition. Thus, the health service is purely diagnostic, as it should be. There is no reason why every community, which has health-minded physicians who are willing to accept the responsibility, cannot have the service. Of course, there is some expense connected with a program of this kind. In two school districts which I know, this is met by an annual budget of 50 cents per pupil. Thus, in Madison, with a school population of one thousand, $500 is budgeted for health service. Each physician receives 50 per cent of a stated salary upon completion of the examinations during the first month of school, 25 per cent on February 1, and the last payment the last month of school. R. S. Westaby, M.D., F.A.C.S., Physician to the South Dakota State Normal School, Madison, S. Dak. The American School Board Journal, October, 1938, page 51.

* * * * *

Health Teaching in High Schools—Numerous surveys of the knowledge of high school and college students show wide-spread belief in erroneous, unscientific and dangerous health practices. Great lack of knowledge of the fundamental facts and principles of hygiene and sanitation is apparent.

To ascertain how high schools are providing the leaders of tomorrow with the information they will need to preserve their health, to protect their families, and to function as effective members of the community in movements for social betterment, a questionnaire was submitted to high school graduates matriculating in a large state university.

They revealed that only 9 per cent of the matriculants had had hygiene, 22 per cent physiology, 50 per cent biology, and 62 per cent general science in high school. Of the 9 per cent who had had hygiene, 82 per cent had been taught by teachers giving instruction in one or more other subjects. Of those who had taken biology and physiology, 42 per cent and 62 per cent, respectively, had been taught by part-time teachers.

Of 6,455 high-school graduates whose records were studied, only 106 or 1.6 per cent had received instruction from a teacher reported to be giving full time to health education, and only 9.2 per cent had been taught hygiene at all in high school. It was revealed that, of the 490 who had taken hygiene under teachers of other subjects, only 22 received their instruction in connection with biology and only sixteen in combination with physiology.

"Health teaching calls for a wide acquaintance with a large number of special fields of human knowledge and a thorough preparation in several of them." The essentials for the proper training of teachers of hygiene in high school are:

1. A thorough background of the fundamental sciences of biology, chemistry, and physics.
2. Knowledge of physiology, bacteriology, psychology, sociology, and economics.
3. An understanding of the principles, psychology, and philosophy of education.
4. Thorough contact with the proper facilities for instruction.

The teacher should not only be well trained, but should be interested in students, sympathetic with their problems, and be able to see in proper perspective the relation of hygiene to personal welfare and social progress. He should be emotionally mature and an example of health in the broad sense of living most and serving best. He should be able to deal with facts and reality with optimism and poise. His personality should be sufficiently dynamic to make his teaching effective, and his character should be rich in courage, fairness, magnanimity, kindliness, and courtesy.

The curricula of many colleges and universities offer the prospective teacher of hygiene an opportunity to get the background of science, pedagogy, and education essential to teach health to high-school students who tomorrow will be determining the destiny of their communities. The demands of our complex society preclude the drafting of the poorly prepared pedagogic "Jack-of-all-trades" to teach a subject which is to provide individuals with knowledge essential to protect themselves, to safeguard their families, and to function intelligently as citizens in the promotion of the general welfare. J. Howard Beard, reprinted from School and Society, April 23, 1938, Volume 47, Number 1217, pages 545-549. Abstracted by E. E. Kleinschmidt.

* * * * *

Reliability of Medical Judgments on Malnutrition.—In view of the many vital decisions (both with reference to the general prevalence of malnutrition and with reference to specific children) that rest on the physician's estimates of nutritional condition, it seems advisable to re-emphasize the limitations of such nutritional estimates and the possibilities for error when records from routine examinations are the bases for either research conclusions or administrative action.

Six pediatricians were asked to examine independently the same group of 108 11-year-old boys and rate their nutritional condition in terms of the Dunfermline scale of "Excellent," "Good," "Fair," and "Poor." The results of this investigation were disconcerting. The physicians differed markedly in the number of

children which they found in poor nutritional condition. According to one of the physicians, 15 of the 108 were malnourished (i.e., recorded as "poor" with reference to nutrition) while another found only 2 whom he considered malnourished. The other 4 physicians selected 12, 10, 7, and 6. But even more confusing was the fact that children classed as malnourished by one physician frequently were not the same children that were rated malnourished by another physician. In fact, one of the boys rated "Poor" by the physician who found only two in the "Poor" condition group was not considered "Poor" by any one of the other physicians. In all there were 25 of the 108 boys rated "Poor" by at least 1 of the physicians, but only 1 who was so rated by the entire group of doctors. Only 3 of the 25 were rated "Poor" by as many as 4 of the 6 physicians. Two of the cases were given every rating in the scale; that is, one of the doctors rated them "Excellent," another rated them "Good," another "Fair," and the fourth "Poor."

Similar experiments were carried out with other physicians on other groups of children, but in each experiment the disagreements were equally great, *indicating that the rating of nutritional status which any child is given depends to a large extent on which doctor makes the rating.*

By way of summary, it may be said that in routine examinations, physicians differ widely in their estimates of the nutritional status of the same children. The differences in judgments are so great that estimates based on a single examination are of little value in determining the relative amount of malnutrition from one time to another. Neither are these nutritional estimates reliable bases for determining which children of a group are malnourished.

It is therefore suggested that practical nutritional programs be focused on correcting the faulty food habits of children, rather than expending energy on routine examinations to determine nutritional status. It is also proposed that reasearch workers concentrate on the construction of valid methods of determining nutritional status rather than making surveys which are of doubtful significance because of the inaccuracies of the estimates upon which their findings are based. Mayhew Derryberry, reprint Number 1909 from the Public Health Reports, Volume 53, Number 7, February 18, 1938, pages 263-268. Abstracted by E. E. Kleinschmidt.

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MEETING

American Student Health Association, December 29-30, 1938, Hotel New Yorker, New York City.

NOTES

Pasteurized Milk.—Under the direction of the Kansas City, Kansas, Health Department a study was made recently of chronic brucellosis in school children. The study included 6,005 white children, 1,017 colored children, a total of 7,022. Of these, 10.1% of the white children and only 2.7% of the colored children were found to react positively to the agglutination test for Bangs' disease. During the ten year period to 1937, the percent of positive reaction had been from 12 to 37 percent. In 1937, 48.8% of the milk used in this city was raw milk. The balance, 51.2% was pasteurized.

Why is the percent of positive reaction so much lower in the colored children than in white children? Of the 642 positive reactions, 79.3% used raw milk, 20% used pasteurized milk.

In the sections of the city in which most of the colored children lived, practically all the milk sold was pasteurized milk.

Tuberculosis Still Recedes,—An outstanding feature in the mortality experience of this year is the decline in the tuberculosis death rate, which, for the first eight months of the year is 11 per cent below that for the corresponding period of last year. This drop exceeds any annual rate of decline observed within the last 18 years in this group of insured persons. Present indications are that at the close of the current year, for the first time in the history of the Metropolitan Life Insurance Company, its Industrial policy-holders will register an annual death rate from tuberculosis less than 50 per 100,000. Less than ten years ago, the figure was nearly twice high. Statistical Bulletin, Metropolitan Life Insurance Co., September 1938, p. 9.

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